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ABSTRACT

The performance of two groups of adult students on the General Educational Development (GED) test was compared to determine whether there was a relationship between the level of student performance on a timed versus non-timed GED test. Each group consisted of the first three hundred students who took the test at twenty-six different testing centers in Texas. In nine centers the test was administered on a time-limit basis while in the remaining seventeen centers the administration of the test was not timed. Analysis of the data indicated that the element of time did make a difference in student performance. The following groups performed significantly better on the non-timed GED tests in comparison to performance on timed tests: individuals under twenty years and over thirty-nine years of age, males, persons who had completed ten or more years of previous schooling, black Americans, and students who had participated in GED preparatory classes. (EM)

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A COMPARATIVE STUDY OF ADULT STUDENT PERFORMANCE ON TIMED VERSUS NON-TIMED GED TESTS IN TEXAS

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Background of the Study

The growth and development of adult education in the United States during the past several years has been tremendous. Over 57,677,000 American adults aged 16 years and older who are not now enrolled in school have not earned a high school diploma (14) (19), despite the fact that a high school credential is a prerequisite for higher education and many types of employment.

During World War II, the development of the General Educational Development Test (GED) by the Committee on Accreditation of the American Council on Education provided thousands of military personnel without a high school diploma the opportunity to satisfy their high school equivalency. As stated in the Granting Credit for Service School Training bulletin (9:4), "The primary use of the GED test is to appraise the educational development of adults who have not completed their formal high school education." A level of educational equivalency may be determined for adults through the nationwide testing program and, if minimum state eligibility requirements are met, they may receive a certificate of high school equivalency.

Turner (17:390) made the following statement concerning testing programs for high school equivalency certificates:

> No one will question that the best and quickest way to become educated is by regularly attending school, and to that end we must improve and expand our educational curriculum and our educational facilities. But for the benefit of those who did not complete formal schooling, we must be prepared to measure and recognize their educational growth, no matter how attained, not only to serve the welfare of the individual citizen but also to serve the needs of our democratic society. A program of accrediting by means of examinations supplements the educational program of our schools and colleges and, when fully recognized, will enable the educators of this country to assume completely their responsibility to the American people.

Since World War II, the GED test has become a highly respected instrument used for granting high school equivalency certificates in all of the United States and its territories. The Annual Statistical Report for the Calendar Year 1974 of the GED Testing Service, American Council on Education (3), reports the following statistics:

1. In 1949, there were 570 official GED centers in operation in the United States and its territories. By 1974, this number had increased by 2,421 centers;

2. The number of persons tested nationally in 1949 was 39,016 whereas, the total number tested in 1974 was 561,203;

3. The average age of examinees was 27.2;

4. The average number of years of previous schooling was 10.7;

5. The number of those planning further study was 40 percent;

6. The number of those failing to meet state standards was also 40 percent.

The report also showed that in the state of Texas in 1974:

1. There were 209 official GED centers in operation;

2. The number tested totaled 49,137;

3. The percent of total volume failing state standards was 34.2;

4. The percent of different persons failing the test battery was 31.4.

Importance of the Study

Whether by force or tradition, or for reasons of expendience, it has generally been the practice to administer and score group tests of ability, aptitude and achievement in such a way as to yield only a time-limit score, defined as the number of items correctly answered within a specified length of time. Thus, the time-limit score, represented in a test, often becomes the sole measure of behavior (4).

The variable of time has a tendency to produce anxiety and fear in the examinee and to leave the examinee with a feeling that he or she has been denied an opportunity to demonstrate his or her ability completely (4). This is especially true in the case of the slow but accurate individual. Since the GED test often carries such great significance for examinees, it was most urgent to determine whether the variable of time hinders in any way the examinee's performance on the test.

The GED test, legally, is not a timed, performance test. The official position of the Texas Education Agency, which is in charge of administering the GED program for the state of Texas, is that time should not be used as a limiting factor during test administration. Yet, for administrative expendiency, some testing centers do establish generalized time limits and ask examinees to attempt to complete the given test part within that time period. This fact was established through a mail-out questionnaire to sixty-four out of two hundred and eight official GED testing centers in Texas. Out of fifty-eight responses received, nineteen indicated that they administered the test on a time-limit basis.

Brief Summary of Related Literature

There is no convincing reason why every individual should complete his secondary education at a given age or within four years after having completed elementary education. For many people, the availability of such programs like the GED program furnishes an opportunity to attain a desired level of education if they were unable to do so during younger years. The GED test is recognized nationwide as a good predictor of educational success and studies such as the one by Tyler (18) have found it to be useful in a multitude of ways. Other writers such as Donahue (5), Anderson (2), and Dreysel and Schmid (6), have shared similar views to those of Tyler. A more recent study by Sharon (15) found that GED tests are useful for college admission assessment, and those persons who score satisfactorily on the examinations can earn college grades comparable to high school graduates.

Recognizing the importance of the successful completion of the GED test for many individuals, all aspects of test administration must be taken into consideration. The use of time limit scores has been one of the more unfortunate characteristics of current test procedures. Studies have been conducted which reveal negative effects of a time limit in testing situations, whereas other research does not support those effects. Studies by Riley (13), Kendall (11), Woodfin (22), Wasson (21), Torrance (16) and Vernon (20) have found student performance increased on untimed tests. On the negative side, studies by Richards (12), Garrett (8), Fleishman (7), Humphry (10) and Acey (1) have found student performance to remain constant or more favorable under time limit conditions. The review of the literature revealed that time limit scores should be used with considerable caution in studies involving the prediction of the effects of various criteria. Therefore, realizing the importance of the GED test, it was the purpose of this study to determine if the time variable affected performance of adult students on the test.

Statement of the Problem

The purpose of this study was to determine whether there was a relationship between the level of students' performance on timed versus non-timed GED tests. More specifically, the problem was: Does a difference exist in student performance (score attained on the GED test) on a timed versus a non-timed GED test according to age, sex, formal grade level completed, ethnic origin and participation or non-participation in GED preparatory classes?

Hypotheses

Five major hypotheses were generated by the statement of the problem. The scope of this investigation included the following:

Ho_1: There is no difference in student performance (score attained on the GED test) on the timed versus non-timed GED test according to age.

Ho_2: There is no difference in student performance (score attained on the GED test) on the timed versus non-timed GED test according to sex.

Ho_3: There is no difference in student performance (score attained on the GED test) on the timed versus non-timed GED test according to formal grade level completed.

Ho_4: There is no difference in student performance (score attained on the GED test) on the timed versus non-timed GED test according to ethnic origin.

Ho_5: There is no difference in student performance (score attained on the GED test) on the timed versus non-timed GED test according to participation or non-participation in GED preparatory classes.

Procedures

Sample

The Division of Adult and Continuing Education, Texas Education Agency, has divided the state into six geographic areas to be served by area consultants. Two of these areas were randomly selected from which the study sample was selected.

From a total of sixty-four official GED testing centers in the two areas, twenty-six agreed to participate in the study. In nine centers, the test was administered on a time-limit basis whereas in the remaining seventeen centers the administration of the test was not timed.

The sample size for the study consisted of six hundred adult students--three hundred students each in the time-limit and non-time limit groups. Each group consisted of the first three hundred students who took the test at the various testing sites, combined in each group. Each site was represented in the sample.

Data Collection

The criterion measure of student performance in both groups was the General Educational Development Test battery. The tests were administered during regular testing sessions at the centers. In the centers where testing was timed, students were limited to two hours to complete each sub-test of the battery. Biographical and related data were collected prior to the start of a testing session.

Data Analysis

In order to study the differences in student performance on the non-timed versus timed GED tests for each of the variables of age, sex, formal grade level completed, ethnic origin and participation or non-participation in GED preparatory classes, the Statistical Analysis System (SAS) was used. The resulting data were presented in a series of contingency tables showing the frequencies of occurence with the type of test taken (time or non-timed) and the results of the test (pass or fail). A chi-square test of

independence was performed for each of the demographic variables with the results showing the chi-square statistic, its degrees of freedom and its significance probability.

Findings

Analysis of the data gathered for this study indicated that the element of time did make a difference in student performance. According to the findings, the following groups performed significantly better (.05 level) on the non-timed GED tests in comparison to performance on timed tests:

1. Individuals under 20 years and over 39 years of age;
2. Males;
3. Persons who had completed 10 or more years of previous schooling;
4. Black Americans; and
5. Students who had participated in GED preparatory classes.

Discussion

Administrators of GED tests should carefully review the findings of this study, compare them to selected previous studies and act accordingly in GED test administration. The results of this study enabled the rejection of all of the null hypotheses tested and indicate that a significant negative effect can be fostered onto individuals who are required to take the GED test under the condition of specific limitations of time. These findings support the previous research studies of Kendall (11), Riley (13), Torrance (16), Vernon (20), and Woodfin (22), which indicate that student performance increased on untimed tests.

Two other factors should also be considered by those who administer GED tests:

1. Researchers and writers in adult education have indicated numerous times how the factor of time in academic performance situations discriminates against adult students. This fact has been supported and reinforced over the years by people who are knowledgeable about adult learners, their abilities, fears, strengths, and other unique features in comparison to pre-adults.

2. The Examiners Manual for the Tests of General Educational Development does not advocate that tests be given under the constraints of time limitations. Perhaps those who developed the tests were really trying to make a point without having to state it openly.

In essence, even though administrative expediency may seem sometimes necessary in GED testing (use of time constraints), anything which would hinder student performance on the test should be avoided if possible.

Assumptions or conclusions about student performance (by groups) on the GED test should be avoided until more specific research can be conducted. For example, why do certain students seem to perform more poorly on timed tests? In other words, was it the time limitation itself or the psychological impact of the time limitation which caused the poor performance?

In addition, a combination of variables should be studied in order to determine if certain combinations of demographic variables could better an individual to predict test performance. There may also be other variables which should be studied in addition to those considered in this study.

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